

June 4, 2003

TO: Internal File

THRU: Daron R. Haddock, Permit Supervisor

FROM: Dana Dean, P.E./Senior Reclamation Hydrologist

RE: 2003 First Quarter Water Monitoring, Canyon Fuel Company, LLC., Soldier Canyon Mine, C/007/018-WQ03-1

- 1. Was data submitted for all of the MRP required sites?** YES ☐ NO ☒
Identify sites not monitored and reason why, if known:

The Permittee reported "No Access" at five of the ten monitoring sites after making more than one attempt to monitor each of the "no access" sites. Unsafe road conditions due to snow, mud, and rocks hampered efforts to monitor. The Permittee hiked to one site where the road was not passable.

One of the "no access" sites, 6-1, is a blocked well, which the Permittee removed from the monitoring plan in an amendment approved by the Division on May 13, 2003.

- 2. On what date does the MRP require a five-year resampling of baseline water data.**
See Technical Directive 004 for baseline resampling requirements. Consider the five-year baseline resubmittal when responding to question one above. Indicate if the MRP does not have such a requirement.

Resampling due date

There is no commitment in the MRP to resample for baseline parameters.

- 3. Were all required parameters reported for each site?** YES ☒ NO ☐
Comments, including identity of monitoring site:

4. Were irregularities found in the data?

YES ☒ NO ☐

Comments, including identity of monitoring site:

Well 32-1 reported a depth of 311.58 feet, 6.24 standard deviations below the average depth of 291.66 feet. This could be due to the drought, though the reported depth was 281.3 feet in the 4th quarter and 299.75 feet in the 3rd quarter of 2002. From 1996 through 2001, the depth ranged from 289 to 294 feet.

Stream G-5 had several parameters that fell more than two standard deviations outside the average. They were:

Parameter	Value	Average Value	Deviations from avg.
Bicarbonate	122	397.39	2.14
Dissolved Mg	12.2	42.64	3.39
Sulfate	20	110.20	2.27
TDS	170	640.18	2.12

Stream G-6 also had several parameters outside the two standard deviation range. They were:

Parameter	Value	Average Value	Deviations from avg.
Bicarbonate	106	307.55	4.14
Chloride	4	12.15	2.16
Dissolved Ca	18.2	54.41	3.27
Dissolved Mg	9.5	43.68	3.30
Dissolved Na	17.8	62.79	2.19
TDS	200	443.10	2.20

The Cation/Anion balance for G-5 and G-6 were 5% and 9%, respectively.

5. Were DMR forms submitted for all required sites?

1st month, YES ☒ NO ☐
2nd month, YES ☒ NO ☐
3rd month, YES ☒ NO ☐

6. Were all required DMR parameters reported?

YES ☒ NO ☐

Comments, including identity of monitoring site:

All DMRs reported "no flow."

7. Were irregularities found in the DMR data?

YES ☐

NO ☒

Comments, including identity of monitoring site:

All DMRs reported "no flow."

8. Based on your review, what further actions, if any, do you recommend?

No further actions are necessary.